

- March 2017 -



Mike Thorpe had a great display set up at the Toronto Sportsman Show last weekend. Mike was selling the dream of building and flying your own aircraft and promoted RAA, COPA and UPAC, subject to the interest of each person he spoke with at the show. Mike shared personal experiences about building and flying his Hi-Max on floats and off.

President's Message

Spring at Last... I hope!

Last issue I mentioned how I thought that by now we were all looking forward to winter being over in Ontario. It seems it doesn't quite want to let go yet, even though it's officially spring now.

We had a fairly good turnout for the March meeting and those that braved the cold and predicted snow (which never really amounted to much), were treated to a movie and snacks. For anyone unable to make it, but wishing to see the movie, "The Red Baron" here's a link...
<https://www.youtube.com/watch?v=spymSdZiv9Q>

As links tend to change over time, I suggest you check it out soon.

The World Meteorological Organization has added a dozen new cloud types to its database and has added a cloud guide on-line. The link below has a flowchart for identifying the basic

cloud types and the site has additional charts for more detailed identification of other types.

<https://www.wmocloudatlas.org/cloud-identification-guide.html>

It might be an interesting addition to a pilot's flight planning resources, but for sure there's at least a lot of interesting stuff to explore on-line. Be sure to check out the cloud photo gallery.

In this month's issue you will find a short technical article written by Lee Coulman on "D" type connectors. Given their low cost, ease of use and proven reliability they are a great choice for low current aviation applications, but having the right tools and knowing how to use them is critical for success.

I have updated the event schedule in this newsletter to show the fly-ins and other aviation events in 2017.

2017 is going to be a great year for KWRAA!

- Dan

The Leading Edge

Livin' the Dream! ... Sellin' the Dream!

Kudos to KWRAA member Mike Thorpe for arranging, setting up and staffing a booth at the Toronto Sportsman Show this year. Mike showed off his Hi-Max ultralight aircraft in an effort to let people know that building and flying your own plane is possible for almost anyone interested in making an effort to do so.

Mike had a great little display that looked like a remote lake campsite, complete with tent, camping gear, campfire, fishing equipment and even a few "well preserved" specimens for which he is so well known. His Hi-Max and floats were there for all to see up close.



Unlike most exhibitors at the show, Mike was not selling anything ... except "the dream".

I witnessed dozens of people approach the booth to find out more about his plane and ask any number of questions about building their own plane. Questions ranged from; how much to build one, how long does it take, where can I get plans, can I build a two place plane, how long does it take to get a licence, to how far and high have you flown it, etc.



There was a lot of interest and Mike advised people to contact UPAC, RAA, COPA and others depending upon their individual interests. We have started to promote ourselves at shows like Aviation Fun Day, but Mike has taken things to a whole different level by setting up at the Sportsman Show in Toronto.

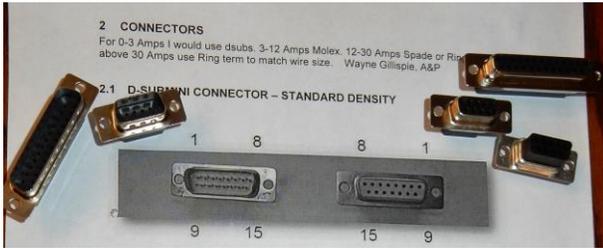
Way to go Mike!!!



"D" Type Connectors

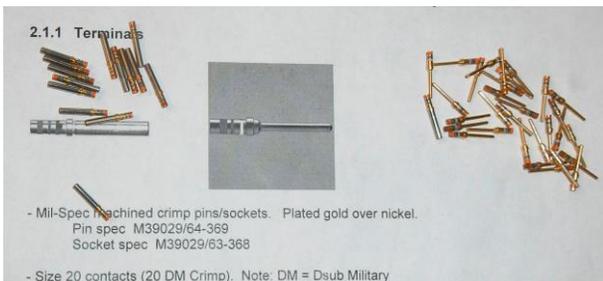
My landing gear warning project for the Searey requires connectors to join the sensors and power to the logic box and synthesizer. My choice for multi pin connections under 5 amps is the "D" connector. Many avionics suppliers like GRT, Garmin and Dynon also use these with 9, 15, 37 and 50 pins, with shielded back shells and positive locking.

"D" connectors got their name from the way they look on the connection face. The oblong face is created simply because there are more pins on one side. So a "DB-25" version has 13 pins on the upper row and 12 on the lower. Though originally designed by Cannon in 1952, they have survived because of their rugged design, flexibility and relatively "low" cost.



But, not all D connectors are created equal. It is important to match parts, using high quality solid pins and sockets with matching bodies. Luckily, there is a MIL-SPEC governing these and Aircraft Spruce (ACS) has the right parts, mostly.

The pins for male connectors and sockets for female connectors, are under \$1. This is considered cheap in aircraft dollars for the flexibility. There are however smaller pins, so be careful when buying pins and sockets.

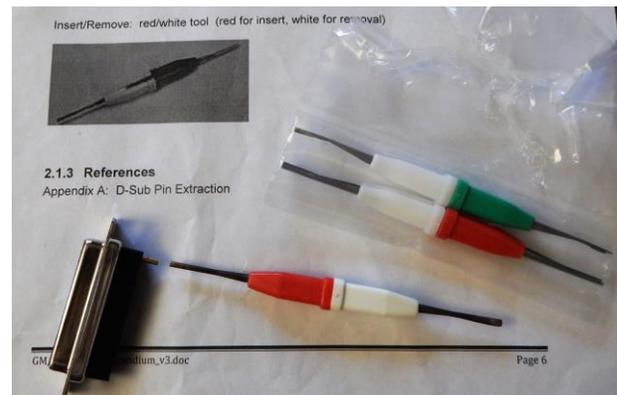


But don't think you have the complete solution just yet. The pins and sockets are solely for crimping and they can't be crimped with simple tools. This is where ACS fails but another supplier shines.

Steinair prides itself on supplying avionics treats to amateur builders, for as much as you can buy, before your spouse finds out. They also help you to put things together with reasonable prices for tools, parts with free video support. I bought a good priced crimp tool for about a tenth of the MIL-SPEC version front ACS. I purchased standard and high density inserts.



The proper tools make all the difference. Strip the wire and insert it into the pin. Look for wire strands in the inspection hole (special note to Dan!). Put the pin and wire all the way into crimp tool. Squeeze the handle until it doesn't click anymore. Pull it to check and away you go. Push the pin into the connector body and wait for the click. Whoops, wrong hole, then use the \$8 extraction tool to get it right. Better get a high density version as well.



Once you've done all your connections, assemble the hood and screw lock options you desire. The avionics suppliers usually apply full back shells and screw/thumb lock hoods with shield terminations. You decide what you need depending on how often you intend to disconnect or how critical the circuit is.

Back to my Searey - I used mostly 9 pin "D"s for the Searey with appropriate pins for loads and sockets for signal or power. I will only use hoods and screw locks for the logic box connections.

For more information refer to:
<http://www.aircraftspruce.ca>

These are standard density versions.

- FEMALE SUB-D PIN 20-24 GAUGE CRIMP SOCKET Part # 11-11877
- MALE SUB-D PIN 24 TO 20 GAUGE CRIMP PIN Part # 11-00139
- 9 PIN MALE D CONNECTOR / CRIMP Part # 11-12150
- 9 PIN FEMALE D CONNECTOR / CRIMP Part # 11-12149
- 9 PIN SILVER SUB-D CONNECTOR CLAMP HOUSING 11-13014

For more information also refer to:
<http://www.steinair.com/product-category/connectors/d-sub/>

and,
http://www.steinair.com/product-category/connectors/d-sub/?product_count=24

Videos: <http://www.steinair.com/documents-and-support/videos/>

- 003. Connectors: Basic overview of aircraft Dsub, Molex and Circular Connectors
- 004: CRIMPING DSUB (DB) MACHINED PINS for Avionics
- 005: DSUB MACHINE PIN INSERTION & REMOVAL

Crimper, 4 way *indent* SKU: SAT-004:

<http://www.steinair.com/product/4-way-indent-crimper/>

High Density Positioner for SAT-004 SKU: SAT-004HDINSER:

<http://www.steinair.com/product/high-density-positioner-for-sat-004/>

Insertion/Removal Tools:

[Insertion/Removal Tool for Standard D-Sub pins, Mil Spec. SKU: SAT-023](#)

[Insertion/Removal Tool for HIGH DENSITY D-Sub Pins Mil-Spec SKU: SAT-034](#)

I hope this information helps your next project using "D" connectors go a little smoother. If you are not using "D" connectors, maybe you should reconsider your choice of connectors. Given their low cost, ease of use and proven reliability they are a great choice for low current aviation applications.

- Lee Coulman

Please send me your ideas for articles in future issues of the newsletter. What information would you like to see or what expertise can you offer the members? I will help you if you want to write an article or even just send me some point form items you want to have included and I will write the article for you.

Send me your requests or ideas for inclusion in a future edition of *The Leading Edge!*

- Dan

The Leading Edge

Upcoming Events in 2017: (Highlighted lines are KWRAA Events*)

April 4-9	-	Sun-n-Fun in Lakeland Florida
April 10	-	April Meeting at 7:30 in the Cadet building at CYKF
May 8	-	May Meeting at 7:30 in the Cadet building at CYKF
June 10	-	KWRAA Fly-In at Cam Wood's in West Montrose
June 23-24	-	COPA National Convention in Kelowna, BC
July 15	-	KWRAA Fly-In at Tom Shupe's in Mount Forest
July 24-30	-	Air Venture Oshkosh in Wisconsin
August 12	-	KWRAA Fly-In at CMZ2 – Metz/MacPat Field in Arthur
August 18-20	-	UPAC Convention – Lubitz Field, Plattsville ON
August 26	-	Aviation Fun Day at CYKF
August 27	-	KWRAA Fly-In at CPR3 near Teviotdale/Palmerston (Tentative)
Sept 2-4	-	Canadian International Air Show – CNE Grounds
September 11	-	September Meeting at 7:30 in the Cadet building at CYKF
October 16	-	October Meeting at 7:30 in the Cadet building at CYKF
November 13	-	November Meeting at 7:30 in the Cadet building at CYKF
November 24 (TBA)	-	KWRAA Christmas Party in lieu of a December meeting

* KWRAA events are fly-in and/or drive-in (Please advise the host in advance if you plan to attend whenever possible.)

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Director FSE:	Mac McCulloch	(519) 848-3392	macpat@live.ca
RAA Canada:	Gary Wolf	(519) 648-3030	garywolf@rogers.com

Hangar for Sale in Roseville:

- 8' high at the back, 9 '2" at the front
- 39' x 24' overall
- Asking \$7000 for the hangar
- Land rent is about \$400/yr

Contact: Allen Mattice at allenjattice@hotmail.com

Reminder: Don't forget to bring your RAA Canada membership card when paying your 2017 KW-RAA Chapter dues. There is a bylaw on the books requiring all local members to also be a member of RAA Canada. Please pay your 2017 KWRAA annual \$25 dues to Mike Thorp at the next meeting.

Be sure to check out the KWRAA website regularly for the latest information regarding KWRAA events and get more chapter information at: www.KWRAA.net